

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) Machining station for machining of at least one workpiece, said machining station comprising

at least one machining unit including a tool spindle carrying a tool and the workpiece being conveyed to a discharge point and being picked up there at the discharge point by at least one workpiece carriage, the at least one workpiece carriage conveying the workpiece ~~to the machining unit~~ for a machining as well as moving the workpiece through the machining unit during the machining, the workpiece being movable by the workpiece carriage along at least only one vertical linear axis Y-axis, the at least one workpiece carriage being guided in a stand or in a tower,
the tool spindle being movable relative to the at least one workpiece carriage along the Z- and X- axes with respect to a direction of movement of the at least one workpiece carriage along the only one vertical linear Y-axis.

2. (Cancelled)

3. (Previously Presented) Machining station according to claim 1, wherein the discharge point is located within the machining station.

4. (Withdrawn) Machining station according to claim 1, characterised in that
wherein the workpiece carriage (4) is able to rotate the workpiece (2) around a
rotational axis (A, B, C).

5. (Previously Presented) Machining station according to claim 1, wherein the
workpiece carriage carries several workpieces.

6. (Cancelled)

7. (Previously Presented) Machining station according to claim 1, wherein the
workpiece carriage moves essentially vertically.

8. (Previously Presented) Machining station according to claim 1, wherein the
workpiece is clamped on a workpiece carrier.

9. (Previously Presented) Machining station according to claim 1, wherein the
workpiece is clamped on a workpiece carrier in an upright, suspended, lateral or
inclined orientation.

10. (Previously Presented) Machining station according to claim 1, wherein the workpiece carriage grasps and holds the workpiece, respectively a workpiece carrier which carries the workpiece, from above, inclined from a side and/or from below.

11. (Previously Presented) Machining station according to claim 1, wherein the workpiece carriage is a frame or a rocker.

12. (Previously Presented) Machining station according to claim 1, wherein the workpiece carriage is a table, and the workpiece is supported by a workpiece table of the workpiece carriage.

13. (Withdrawn) Machining station according to claim 1, ~~characterised in that~~ wherein the workpiece carriage (4) can rotate ~~rotates~~ the workpiece (2) around at least one rotational axis (A, B, C), and the rotational axis is rectangular (A, C), parallel (B) or angular (CB) to the vertical direction of movement (Y) of the workpiece carriage (4).

14. (Withdrawn) Machining station according to claim 1, characterised in that
wherein a hinged bearing (42), in particular around the rotational axis (A),
respectively around a horizontal axis, is provided on the workpiece carriage (4).

15. (Withdrawn) Machining station according to claim 1, characterised in that
wherein several workpieces (2) which are positioned on the workpiece carriage (4)
can be are rotated around a common horizontal axis (A).

16. (Withdrawn) Machining station according to claim 1, characterised in that
wherein the workpiece carriage (4) can rotate rotates the workpiece (2) around two
or three ~~axis (A, B, C)~~ which are axes each directed rectangular to each other.

17. (Withdrawn) Machining station according to claim 1, characterised in that
wherein on the workpiece carriage (4) at least one, preferably two, lateral cheeks (43)
are cheek is provided which rotatably carry carries a carrier (46), and the carrier (46)
holds the workpiece (2) or the a workpiece carrier (5).

18. (Withdrawn) Machining station according to claim 1, characterised in that
wherein the workpiece (2) or the a workpiece carrier (5) is held by a carrousel (47)

which is supported rotatably on a carrier (46), and the carrier is arranged at the workpiece carriage.

19. (Withdrawn) Machining station according to claim 1, characterised in that wherein at least one, preferably two, lateral cheeks (43) are cheek is provided at the workpiece carriage (4) and the at least one lateral cheeks (43) hold cheek holds a hinged bearing (42).

20. (Withdrawn) Machining center according to claim 1, characterised in that wherein the workpiece (2) or the a workpiece carrier (5) is held by a carrousel (47) which is supported rotatably on a carrier (46) and the carrier is arranged on the workpiece carriage and the carrousel (47) can be turned preferably around the a B-axis, in particular around a vertical axis.

21. (Withdrawn) Machining center according to claim 1, characterised in that wherein for each workpiece (2) carried by the workpiece carriage (4) a single, in particular also formed each by single carrousels, preferably vertically orientated rotational axis (B) carrousel is provided.

22. (Withdrawn) Machining station according to claim 1, characterised in that
wherein the workpiece carriage (4) is guided in a frame (11).

23. (Withdrawn) Machining station according to claim 1, characterised in that
wherein the workpiece carriage (4) is guided in such a way that a machining from two
sides, ~~in particular from both sides~~ with regard to ~~the a~~ conveying line (6) is carried
out.

24. (Withdrawn) Machining station according to claim 1, characterised in that
wherein the workpiece carriage (4) is guided in ~~a~~ the stand (10) and the stand (10) for
the guide of the workpiece carriage (4) is arranged in ~~the a~~ region of the discharge
point (60) on ~~the a~~ side opposite the machining unit (3).

25. (Withdrawn) Machining station according to claim 1, characterised in that
wherein the workpiece carriage (4) is guided in a frame (11) and the frame (11)
extends, respectively is supported, in ~~the a~~ region of the discharge point (60) on both
sides of the discharge point (60).

26. (Withdrawn) Machining station according to claim 1, characterised in that
wherein the workpiece carriage is guided in a stand (10) or a frame (11) and the vertically orientated stand parts, respectively frame parts (12), have guide rails (15) on which at least one each, preferably two each, guide shoes shoe of the workpiece carriage (4) move moves.

27. (Cancelled)

28. (Currently Amended) Machining station according to claim 1, wherein the workpiece is moved along a conveying line and the discharge point is part of the conveying line, respectively the conveying line is connected to the discharge point.

29. (Withdrawn) Machining station according to claim 1, characterised in that
wherein on the machining station a first discharge point (66) for the feeding and a second discharge point (67), distant from the first one, for the removing of the workpieces (2) is provided.

30. (Withdrawn) Machining station according to claim 1, characterised in that
wherein the machining unit (3) has conveying means (62) for the movement of the

~~workpiece (2), respectively of the workpiece carrier (5), on the a conveying line (6) at least in the region of the machining station (1).~~

31. (Currently Amended) Machining station according to claim 1, wherein the machining unit has conveying means for movement of the workpiece, ~~respectively a workpiece carrier~~ on a conveying line ~~at least in a region of the machining station,~~ and the conveying means feeds a workpiece, ~~respectively a workpiece carrier~~, waiting in front of the machining station on the conveying line into the machining station.

32. (Currently Amended) Machining station according to claim 1, wherein the machining unit has conveying means for the movement of the workpiece, ~~respectively a workpiece carrier~~, on the conveying line ~~at least in a region of the machining station~~ and the conveying means conveys finished workpieces to the conveying line positioned in a flow direction behind the machining station.

33. (Previously Presented) Machining station according to claim 1, wherein the machining unit is moved and positioned rectangularly to movement of the workpiece carriage.

34. (Previously Presented) Machining station according to claim 1, wherein the machining unit carries one or more tool spindles.

35. (Withdrawn) Machining station according to claim 1, ~~characterised in that the machining station has further comprising~~ several machining units (3).

36. (Withdrawn) Machining station according to claim 1, ~~characterised in that wherein the workpiece (2) is positioned between two machining units (3) of the machining station during the machining.~~

37. (Withdrawn) Machining station according to claim 1, ~~characterised in that wherein the workpiece carriage (4) is able to turn the workpiece (2) around at least one rotational axis (A, B, C) and the rotational axis (A) is, on the one hand, rectangular to the a spindle axis (31) and, on the other hand, is rectangular to the direction of movement (Y) of the workpiece carriage (4).~~

38. (Currently Amended) Machining station according to claim 1, ~~wherein the workpiece carriage carries further comprising~~ a tool magazine for the machining unit

and the workpiece carriage is positioned correspondingly for a change of tools on the machining unit.

39. (Withdrawn) Machining station according to claim 1, characterised in that wherein independently from the movement of the workpiece carriage also a tool magazine ~~can be~~ is moved and positioned.

40. (Withdrawn) Machining station according to claim 1, characterised in that wherein a clamping device (50) is provided in order to connect the workpiece (2), respectively the workpiece carrier (5) carrying the workpiece (2), with the workpiece carriage (4).

41. (Currently Amended) Machining station according to claim 1, wherein relative motion of the workpiece carriage serves for grasping, respectively releasing, the workpiece ~~from the workpiece carriage~~.

42. (Withdrawn) Machining unit according to claim 1, characterised in that wherein a clamping device on the workpiece carriage (4) is formed by a gripper (500) which ~~can~~ is lifted and lowered, and that for lifting and lowering the gripper (500) an

eccentric drive (503) is provided which moves together with the workpiece carriage (4).

43. (Withdrawn) Machining unit according to claim 1, characterised in that wherein on the workpiece carriage (4) a hinged bearing (42) is provided, in particular around ~~the a~~ rotational axis (A), respectively around a horizontal axis, and that a counterweight (8) is provided on the hinged bearing (42).

44. (Withdrawn) Machining station according to claim 1, characterised in that wherein on the workpiece carriage (4) a hinged bearing (42), in particular around the rotational axis (A), respectively around a horizontal axis, is provided, and that a counterweight (8) is provided on the hinged bearing (42); and that the counterweight is formed by a working cylinder which acts on a crank of a carrier (46).

45. (Currently Amended) Machining station according to claim 1, further comprising two towers for movement of the workpiece, and each tower carries a movable workpiece carriage and the moveable workpiece carriages engage and vertically carry at least one workpiece.

46. (Currently Amended) Machining station according to claim 1, further comprising two towers for movement of the workpiece, and each tower carries a movable workpiece carriage and the moveable workpiece carriages engage and vertically carry at least one workpiece and one tower each arranged on one side each of a conveying way.

47. (Withdrawn) Machining station according to claim 1, characterised in that the machining station (1) has further comprising two towers (103, 104) for the movement of the workpiece (2), that the towers (103, 104) are arranged one behind the other in direction of conveying of the workpieces (2) and that each tower (103, 104) is supported on both sides of the a conveying line (6), each tower (103, 104) having an opening (105) for the conveying line for that purpose.

48. (Withdrawn) Machining station according to claim 1, characterised in that the machining station (1) has further comprising two towers (100, 101) for the movement of the workpiece (2), each tower carries a movable workpiece carriage and the workpiece carriages, if necessary together, carry at least one workpiece and the discharge point (60) is located between the towers (100, 101, 103, 104).

49. (Currently Amended) Machining station according to claim 1, wherein the machining unit has conveying means for movement of the workpiece, respectively the workpiece carrier on a conveying line, at least in a region of the machining station, and further comprising two towers for movement of the workpiece, and each tower carries a movable workpiece carriage and the moveable workpiece carriages engage and vertically carry at least one workpiece, and the conveying means is located between the towers.

50. (Withdrawn) Machining station according to claim 1, characterised in that the machining station (1) has further comprising two towers (100, 101) for the movement of the workpiece (2), each tower carries a movable workpiece carriage and the workpiece carriages, if necessary together, carry at least one workpiece and the tool spindle (30) is arranged between the towers (103, 104).

51. (Withdrawn) Machining station according to claim 1, characterised in that the machining station (1) has further comprising two towers (100, 101) for the movement of the workpiece (2), each tower carries a movable workpiece carriage and the workpiece carriages, if necessary together, carry at least one workpiece and a workpiece (2) or a workpiece carrier (5) carrying the workpiece (2) is moved by at

least one workpiece carriage (4) or both workpiece carriages (4, 4') of the two towers (100, 101, 103, 104).

52. (Currently Amended) Machining station according to claim 1, further comprising two towers for movement of the workpiece, and each tower carries a movable workpiece carriage and the moveable workpiece carriages engage and vertically carry at least one workpiece and the towers are connected in an upper region .

53. (Withdrawn) Machining station according to claim 1, characterised in that the machining station (1) has further comprising two towers (100, 101) for the movement of the workpiece (2), each tower carries a movable workpiece carriage and the towers, if necessary together, carry at least one workpiece and each tower (100, 101, 103, 104) has a drive for the workpiece carriage (4, 4').

54. (Withdrawn) Machining station according to claim 1, characterised in that the machining station (1) has further comprising two towers (100, 101) for the movement of the workpiece (2), each tower carries a movable workpiece carriage and the workpiece carriages, if necessary together, carry at least one workpiece and each

tower (100, 101, 103, 104) has a drive for the workpiece carriage (4, 4') and the workpiece carriage drives of the two towers (100, 101, 103, 104) are synchronised to each other.

55. (Withdrawn) Machining station according to claim 1, characterised in that the machining station (1) has further comprising two towers (100, 101) for the movement of the workpiece (2), each tower carries a movable workpiece carriage and the workpiece carriages, if necessary together, carry at least one workpiece and the workpiece carriages (4, 4') of both towers (100, 101, 103, 104) have a common rotational axis (A).

56. (Withdrawn) Machining station according to claim 1, characterised in that the machining station (1) has further comprising two towers (100, 101) for the movement of the workpiece (2), each tower carries a movable workpiece carriage and the workpiece carriages, if necessary together, carry at least one workpiece and the workpiece carriages (4, 4') each have a rotating drive for a common rotational axis (A) and these the rotational drives can be are synchronised to each other.

57. (Withdrawn) Machining station according to claim 1, characterised in that
wherein the workpiece carriage (4, 4¹) for the workpiece (2) has a rotational drive for
a rotational axis (B) which is orientated parallel to the direction of movement (Y) of
the workpiece carriage (4, 4¹).

58. (Withdrawn) Machining station according to claim 1, characterised in that
~~the machining station (1) has further comprising~~ two towers (100, 101) for the
movement of the workpiece (2), each tower carries a movable workpiece carriage and
the workpiece carriages, if necessary together, carry at least one workpiece and the
workpiece carriages (4, 4¹) of both towers (100, 101, 103, 104) can be are connected
by means of a bridge (48), the bridge (48) being is able to rotate the at least one
workpiece (2) around at least one rotational axis (B) parallel to the direction of
movement of the workpiece carriages (4, 4¹), if necessary also independently to each
other.

59. (Previously Presented) Machining station according to claim 1, wherein the
machining unit has conveying means for movement of the workpiece, respectively the
workpiece carrier, on a conveying line at least in a region of the machining station,

and the conveying means carries out feeding as well as removing of ~~unfinished~~, respectively ~~machined~~, workpieces.

60. (Withdrawn) Machining station according to claim 1, characterised in that wherein the machining unit (3) has conveying means (62) for the movement of the workpiece (2), respectively the workpiece carrier (5), on the ~~a~~ conveying line (6) at least in the region of the machining station (1) and the conveying means (62) has a means for feeding and removing (600), the unfinished workpieces (2) being are fed on the means of feeding (601) and the machined workpieces (2) being are conveyed away on the means for removing (600).

61. (Withdrawn) Machining station according to claim 1, characterised in that wherein the machining unit (3) has conveying means (62) for the movement of the workpiece (2), respectively the workpiece carrier (5), on the ~~a~~ conveying line (6) at least in the region of the machining station (1) and the conveying means (62) has a means for feeding and removing (600), the unfinished workpieces (2) being are fed on the means for feeding (601) and the machined workpieces (2) being are conveyed away on the means for removing (600) and the means for feeding (601) and the means for removing (600) being are arranged one above the other or next to each other.

62. (Previously Presented) Machining station according to claim 1, wherein two or more workpieces are clamped on a workpiece carrier.

63. (Previously Presented) Machining station according to claim 1, wherein the workpieces are arranged on a workpiece carrier in a longitudinal direction of a way of conveying.

64. (Currently Amended) Machining station according to claim 1, ~~wherein the machining station has further comprising~~ two or more tool spindles ~~and the for~~ machining station machines simultaneously two or more workpieces.

65. (Withdrawn) Machining station according to claim 1, ~~characterised in that wherein~~ several workpieces (2) are moved, ~~respectively rotated;~~ by one or more workpiece carriages (4, 4') in the ~~a~~ same way or at least partly differently.

66. (Withdrawn) Machining station according to claim 1, ~~characterised in that wherein~~ the spindle axis (31) of the tool spindle (30) is orientated parallel or rectangular to the ~~a~~ direction of transport of the workpiece (2) ~~on the conveying way.~~

67. (Previously Presented) Machining installation comprising at least one or more machining stations according to claim 1, wherein all of the machining stations are provided with a conveying line for feeding and removing the workpiece.

68. (Withdrawn) Machining installation according to claim 67, characterised in that wherein two or more machining stations are provided one behind the other and fed workpieces are conveyed through a first machining station to a free machining station.

69. (Currently Amended) Machining installation according to claim 67, wherein each workpiece, respectively each workpiece carrier, carries an identification element which also can be written on.

70. (Withdrawn) Machining installation according to claim 67, characterised in that wherein the machining stations are arranged one behind the other and the line for removing of the first machining station is the feeding line for the second machining station.

71. (Withdrawn) Machining installation according to claim 67, characterised in that wherein several machining stations are arranged between a feeding line and a line for removing which are common for the machining station.

72. (Withdrawn) Machining installation according to claim 67, characterised in that wherein the machining stations are arranged one behind the other and the removing line of the first machining station is the feeding line for the second machining station and that there is a connecting station from the removing line to the feeding line, and already machined workpieces are again fed for machining on the feeding line.

73. (Withdrawn) Machining installation according to claim 67, characterised in that wherein the machining stations are arranged parallel and/or serial to each other and are connected by a conveying line.

74. (Withdrawn) Machining installation according to claim 67, characterised in that wherein for conveying the workpieces at least two conveying lines are provided which are arranged essentially parallel to each other, next to each other or one above the other.

75. - 77. (Cancelled)